









Online Retail Dashboard Report

Live Dashboard: <https://retail-sales-analysis-lpiuubrjim2vIntcx2kr8h.streamlit.app/>

1. Overview

The **Online Retail Dashboard** is an interactive Streamlit application designed to provide actionable insights into sales data.

It helps business analysts and managers monitor key metrics, sales trends, customer behavior, and product performance in real-time.

2. Key Performance Indicators (KPIs)

- **Total Revenue:** Total sales revenue for the selected period.
 - **Total Orders:** Count of unique orders.
 - **Average Order Value (AOV):** Average revenue per order.
 - **Repeat Customer Percentage:** Percentage of returning customers.
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3. Revenue Trends

The dashboard supports revenue analysis at different granularity levels:

- **Monthly Trend:** Shows revenue by month.
 - **Weekly Trend:** Shows revenue by week.
 - **Daily Trend:** Shows detailed daily trends for selected dates.
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4. Revenue vs Orders Analysis

- Scatter chart visualizing relationship between total orders and revenue.
 - Helps identify high-revenue but low-order periods or vice versa.
 - Point size and color indicate revenue contribution per month.
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5. Top Products Analysis

- Shows top N products based on total revenue.
- Helps focus on high-performing products for marketing and inventory planning.

6. Customer Segments Insights

- Uses **RFM (Recency, Frequency, Monetary) analysis** to segment customers:
 - **Recency:** Days since last purchase
 - **Frequency:** Number of orders
 - **Monetary:** Total money spent
 - Helps understand loyal and high-value customers.
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7. Category & Sub-Category Insights

- Drill-down charts show sales performance by **category** and **sub-category**.
 - Helps identify top-performing categories and products for strategic decisions.
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8. Geographical Insights

- Shows revenue contribution by country.
 - Identifies high-sales regions and opportunities for growth.
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9. Download & Export Options

- Filtered datasets can be exported directly from the dashboard.
- Supports further analysis in Excel, Python, or BI tools.

10. Notes

- Ensure data files (`cleaned.csv` and `customers_with_segments.csv`) are in the correct paths.
 - If category/sub-category columns are missing, the corresponding insights section will show a warning.
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11. Conclusion

The **Online Retail Dashboard** enables business teams to:

- Monitor sales performance and KPIs in real-time.
- Identify top products, categories, and regions.
- Understand customer behavior through RFM segmentation.
- Make informed decisions for marketing, inventory, and sales strategies.